



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/656,255      | 09/06/2000  | Michael J. O'Brien   | 9234                | 9291             |

21905 7590 11/18/2002

CONNORS ASSOCIATES  
1600 DOVE ST  
SUITE 220  
NEWPORT BEACH, CA 92660

EXAMINER

BAHTA, KIDEST

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/656,255

Applicant(s)

O'BRIEN ET AL.

Examiner

Kidest Bahta

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 September 2000 and 03 November 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2125

***Claim Rejections - 35 USC § 112***

1. Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 is not clear whether all or a part of the limitation of claim 7 included,

Claim 14 is not clear whether all or a part of the limitation of claim 10 included.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al. (U. S. Patent 6,152,731) in view of Duret et al. (U. S. Patent 4,742,464).

Regarding claims 1-14, Jordan discloses scanning the surfaces of the model to collect three dimensional digital data corresponding to the surfaces (Fig. 7), displaying on a monitor screen (Fig. 3, element 48) of computer aided design equipment an image of a proposed dental prosthesis based, at least in part (Fig. 12A and 12B), on the collected three dimensional digital data corresponding to the surfaces (Fig. 3, element 44), with the aid of the computer aided design equipment, modifying the image so that the image displayed on the monitor screen substantially corresponds to the dental prosthesis to be manufactured (Fig. 16A and Fig. 16B), the pattern has marginal edges

Art Unit: 2125

that are at least 3/4 of a millimeter from margins of an individual tooth structure to which the dental prosthesis is to be attached (column 15, lines 6-20).

Jordan fails to disclose collecting the three dimensional digital data substantially corresponding to the image of the dental prosthesis to be manufactured and transmitting the three dimensional digital data of the image of the dental prosthesis to be manufactured to automated prototyping equipment, forming a model of a patient's dentition including surfaces corresponding to the dental structure nearby the location that the dental prosthesis is to be placed in the mouth of a patient, using the automated prototyping equipment making from a wax material the pattern of the dental prosthesis to be manufactured based upon the three dimensional digital data substantially corresponding to the image of the dental prosthesis to be manufactured; the marginal edges of the pattern are manually adjusted to compensate for the specific configuration of the individual tooth structure by adding wax material to the edges.

However, Duret discloses collecting the three dimensional digital data substantially corresponding to the image of the dental prosthesis to be manufactured and transmitting the three dimensional digital data of the image of the dental prosthesis to be manufactured to automated prototyping equipment (column 6, lines 20-40; Fig. 7 and Fig. 21), forming a model of a patient's dentition including surfaces corresponding to the dental structure nearby the location that the dental prosthesis is to be placed in the mouth of a patient, using the automated prototyping equipment making from a wax material the pattern of the dental prosthesis to be manufactured based upon the three dimensional digital data substantially corresponding to the image of the dental

Art Unit: 2125

prosthesis to be manufactured (column 8, lines 20-49); the marginal edges of the pattern are manually adjusted to compensate for the specific configuration of the individual tooth structure by adding wax material to the edges (column 8, lines 43-45).

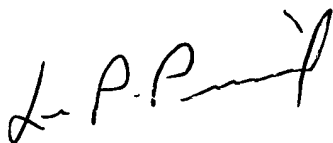
It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify the teachings of Jordan with the teachings of Duret in order to manufacture a prototype which functions perfectly and which allowed a dental prosthesis to be manufactured within 20 minutes.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
5. Any inquiry concerning communication or earlier communication from the examiner should be directed to Kidest Bahta, whose telephone number is (703) 308-6103. The examiner can normally be reached on M-F from 7:00 a.m. to 4:30 p.m. EST (every other Friday). If attempts to reach the examiner by phone fail, the examiner's supervisor, Leo Picard, can be reached (703) 308-0538. Additionally, the fax numbers for Art Unit 2125 are (703) 746-7238 for after final, (703) 746-7239 for Official and Non-Official /Draft (703) 746-7240. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist at (703) 305-9600.

Kidest Bahta

November 13, 2002



**LEO PICARD**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**